

I claim:

1. A method for extending the leg of a ladder, comprising:

- 5           (a) providing a ladder having a leg having a foot;
- (b) providing an extender for said leg of said ladder, said extender including:
- a first channel shaped and dimensioned to receive said leg of said ladder;
- a second channel shaped and dimensioned to receive said first channel;
- a first member pivotally connecting said first channel to said second channel;
- 10           -a second member pivotally connecting said first channel to said second channel;
- wherein said second channel may be selectively moved from a stowed position wherein said leg is received by said first channel and said first channel is received by said second channel, to an extended position wherein said second channel outwardly
- 15           projects from said first channel and resides in substantially co-linear relationship with said first member;
- a lock selectively connectable between said first channel and said second channel to retain said second channel in said extended position;
- a retainer for fixedly attaching said extender to said leg of said ladder;
- 20           (c) using said retainer to attach said first channel to a desired position along said leg of said ladder wherein said first channel receives said leg of said ladder;
- (d) placing said second channel in said extended position; and,
- (e) using said lock to retain said second channel in said extended position.

25   2. The method of Claim 1, further including:

- in step (b), said first member including a first pair of arms connected by a first bridge; said first bridge having an edge which contacts said first channel when said second channel is in said extended position;
- in step (b), said second member including a second pair of arms connected by a second
- 30   bridge; and,

said second bridge having an edge which contacts said first channel when said second channel is in said extended position.

3. The method of Claim 1, further including:

5           in step (b), said lock including a locking strap pivotally connected to said second channel, wherein said locking strap may be selectively attached to said first channel.

4. The method of Claim 1, further including:

          in step (b), said retainer including:

10               -said first channel having two sides, each said side having an open rod;  
                  -an insert selectively connectable between said two open rods;  
                  -a screw threadably connected to said insert; and,  
                  -so that said insert engages said two rods and said screw may be turned to  
                  engage said leg of said ladder and thereby fixedly hold said first channel in  
15               place on said leg of said ladder.

5. The method of Claim 4, further including:

          in step (b), said first channel including two pairs of said open rods wherein said insert  
may be connected between either said pair.

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6. The method of Claim 1, further including:

          in step (b),

                  said first member connected to said first channel at a first pivot axis P1;  
                  said second member connected to said first channel at a second pivot axis P2;  
25               said first member connected to said second channel at a third pivot axis P3;  
                  said second member connected to said second channel at a fourth pivot axis P4;  
                  a distance from P1 to P2 being L1;  
                  a distance from P2 to P4 being L2;  
                  a distance from P4 to P3 being L3;  
30               a distance from P3 to P1 being L4; and,

wherein a ratio of L1 to L2 is about 1.2, a ratio of L1 to L3 is about 1.1, and a ratio of L1 to L4 is about 1.4.

7. The method of Claim 1, further including:

5        in step (c), positioning said extender so that said extender extends below said foot of said leg of said ladder.

8. The method of Claim 1, further including:

10        in step (c), positioning said extender so that a foot of said extender is even with said foot of said leg of said ladder.

9. The method of Claim 1, further including:

15        in step (c), positioning said extender along said leg of said ladder so that said extender causes said ladder to rest evenly on a support surface.

10. The method of Claim 1, further including:

15        in step (a), said ladder having four said legs;  
      providing three additional said extenders;  
      repeating steps (c) through (e) for each said leg of said ladder.

11. The method of Claim 10, further including:

20        wherein in step (c) said four extenders are all attached an equal distance from said foot of said corresponding legs.

25        12. The method of Claim 10, further including:

      wherein in step (c) said four extenders are not all attached an equal distance from said foot of said corresponding legs.

13. An extender for the leg of a ladder, comprising:

30        a first channel shaped and dimensioned to receive the leg of the ladder;

a second channel shaped and dimensioned to receive said first channel;  
a first member pivotally connecting said first channel to said second channel;  
a second member pivotally connecting said first channel to said second channel; and,  
wherein said second channel may be selectively moved from a stowed position wherein  
5 said leg is received by said first channel and said first channel is received by said second  
channel, to an extended position wherein said second channel outwardly projects from said  
first channel and resides in substantially co-linear relationship with said first member.

14. An extender according to Claim 13, further including:  
10 said first member including a first pair of arms connected by a first bridge;  
said first bridge having an edge which contacts said first channel when said second  
channel is in said extended position; and,  
said second member including a second pair of arms connected by a second bridge;  
and,  
15 said second bridge having an edge which contacts said first channel when said second  
channel is in said extended position.

15. An extender according to Claim 14, further including:  
a lock selectively connectable between said first channel and said second channel to  
20 retain said second channel in said extended position.

16. An extender according to Claim 15, further including:  
said lock including a locking strap pivotally connected to said second channel, wherein  
said locking strap may be selectively attached to said first channel.

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17. An extender according to Claim 13, further including:  
a retainer for fixedly attaching said extender to a desired position along the leg of the  
ladder.

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18. An extender according to Claim 17, further including:

said retainer including:

- said first channel having two sides, each said side having an open rod;
- an insert selectively connectable between said two open rods;
- a screw threadably connected to said insert; and,
- so that said insert engages said two rods and said screw may be turned to engage the leg of the ladder and thereby fixedly hold said first channel in place on the leg of the ladder.

19. An extender according to Claim 18, further including:

said first channel including two pairs of said open rods wherein said insert may be connected between either said pair.

20. An extender according to Claim 14, further including:

- said first member connected to said first channel at a first pivot axis P1;
- said second member connected to said first channel at a second pivot axis P2;
- said first member connected to said second channel at a third pivot axis P3;
- said second member connected to said second channel at a fourth pivot axis P4;
- a distance from P1 to P2 being L1;
- a distance from P2 to P4 being L2;
- a distance from P4 to P3 being L3;
- a distance from P3 to P1 being L4; and,
- wherein a ratio of L1 to L2 is about 1.2, and a ratio of L1 to L3 is about 1.1, and a ratio of L1 to L4 is about 1.4.

21. An extender according to Claim 14, further including:

- said second channel having a plurality of spaced holes;
- an extension having a latch having a pin which is shaped and dimensioned to engage one of said plurality of spaced holes; and,

said extension selectively connectable to said second channel wherein said pin of said latch engages one of said plurality of spaced holes in said second channel.

22. An extender according to Claim 14, further including:

5           a lock selectively connectable between said first channel and said second channel to retain said second channel in said extended position;

          said lock including a locking strap pivotally connected to said second channel, wherein said locking strap may be selectively attached to said first channel;

          a retainer for fixedly attaching said extender to a desired position along the leg of the  
10   ladder;

          said retainer including:

                  -said first channel having two sides, each said side having an open rod;

                  -an insert selectively connectable between said two open rods;

                  -a screw threadably connected to said insert; and,

15           -so that said insert engages said two rods and said screw may be turned to engage the leg of the ladder and thereby fixedly hold said first channel in place on the leg of the ladder.

          said first channel including two pairs of said open rods wherein said insert may be connected between either said pair;

20           said first member connected to said first channel at a first pivot axis P1;

          said second member connected to said first channel at a second pivot axis P2;

          said first member connected to said second channel at a third pivot axis P3;

          said second member connected to said second channel at a fourth pivot axis P4;

          a distance from P1 to P2 being L1;

25           a distance from P2 to P4 being L2;

          a distance from P4 to P3 being L3;

          a distance from P3 to P1 being L4; and,

          wherein a ratio of L1 to L2 is about 1.2, a ratio of L1 to L3 is about 1.1, and a ratio of L1 to L4 is about 1.4.

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23. A ladder, comprising:

said ladder having four legs each said leg having a foot;

four extenders, one said extender attached to each of said four legs, each said extender including:

- 5                   a first channel shaped and dimensioned to receive the leg of the ladder;  
                  a second channel shaped and dimensioned to receive said first channel;  
                  a first member pivotally connecting said first channel to said second channel;  
                  a second member pivotally connecting said first channel to said second channel;  
and,  
10                  wherein said second channel may be selectively moved from a stowed position  
                  wherein said leg is received by said first channel and said first channel is received by  
                  said second channel, to an extended position wherein said second channel outwardly  
                  projects from said first channel and is substantially co-linear with said first member.  
                  -a lock selectively connectable between said first channel and said second  
15                  channel to retain said extender in said extended position; and,  
                  -a retainer for fixedly attaching said extender to said leg of said ladder.

24. A ladder according to Claim 23, further including:

20                  said ladder having a lowest rung disposed within six inches of said feet of two said  
                  legs.

25. A ladder according to Claim 23, further including:

                  said ladder having an apex;  
                  a support pivotally connected to said apex wherein said support may be rotated from an  
25                  upward extended position to a downward position adjacent to two of said legs; and,  
                  said support having a tray disposed in a substantially horizontal position both when  
                  said support is in said extended position and when said support is in said downward position.